Supreme Court, U.S.
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No. _____

In the
Supreme Court of the United States

INTERACTIVE TECHNOLOGIES, INC.,

Petitioner,

v.

PITTWAY CORPORATION and
ADEMCO DISTRIBUTION, INC.,

Respondent.

ON PETITION FOR A WRIT OF CERTIORARI
TO THE UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

PETITION FOR A WRIT OF CERTIORARI

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QUESTIONS PRESENTED

In *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, 520 U.S. 17 (1997), the Court reaffirmed the doctrine of equivalents as a means of establishing patent infringement. In adhering to the doctrine, the Court reaffirmed as well the "all-elements" rule---the concept that the doctrine of equivalents must be applied to individual elements of a patent claim---as a limitation on the application of the doctrine. The Court left it to the Federal Circuit in future cases to refine the formulation of the test for equivalence.

In the present case, the Federal Circuit employed its formulation of the test for equivalence to nullify a jury award of $36 million for patent infringement. In reaching its decision that a claim element was "altogether missing," the Federal Circuit merely applied a literal identity test to determine the role played by patent claim elements in assessing compliance with the all-elements rule. It paid no heed to the "context of the specific patent claim," and made no inquiry into the "role played by each element" in that context, contrary to the mandate of *Warner-Jenkinson*. Continued adherence by the Federal Circuit to the rule applied in *Interactive Technologies, Inc. v. Pittway, No. 98-1464, (Fed. Cir. June 1, 1999)* will allow the all-elements rule to swallow the doctrine of equivalents and will re-shape the contours of the doctrine as they have been established in the Court's *Graver Tank* and *Warner-Jenkinson* decisions. The contours of the all-elements rule are currently under review *en banc* in the Federal Circuit, in a case presenting an issue similar to the legal issue presented in this Petition.

The questions presented are:

1. Whether the Federal Circuit improperly altered the "all-elements" rule of the doctrine of equivalents to focus solely on

the literal patent claim language in violation Supreme Court and Federal Circuit precedent, thereby effectively eliminating the doctrine of equivalents as a theory of patent claim infringement distinct from literal patent claim infringement?

2. Whether this case satisfies the requirements for an order of grant of certiorari, vacation of judgment, and remand to the Federal Circuit (a "GVR order"), given that the Federal Circuit has granted an *en banc* rehearing in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, -- F.3d --, 51 USPQ2D 1959 (1999) *granting reh'g and vacating* 172 F.3d 1361 on the issue of the proper scope and implementation of the "all-elements" rule of the doctrine of equivalents, where the resolution of the issue on rehearing may determine the result of the pending litigation?

LIST OF ALL PARTIES

The parties to the proceedings below were the Petitioner, Interactive Technologies, Inc, and the Respondents, Pittway Corporation and Ademco Distribution, Inc.

CORPORATE DISCLOSURE STATEMENT

The parent corporation of Interactive Technologies, Inc, is ITI Technologies, Inc.

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PETITION FOR A WRIT OF CERTIORARI

The Petitioner Interactive Technologies, Inc. respectfully prays that a writ of certiorari issue to review the judgment and opinion of the United States Court of Appeals for the Federal Circuit, entered in the above-entitled proceeding on June 1, 1999. A petition for rehearing was timely filed but denied by that court on July 8, 1999.

OPINIONS AND ORDERS BELOW

The opinion of the Court of Appeals for the Federal Circuit is unreported. It is reprinted in the appendix, hereto, Pet. App. p. A-1. The denial of the petition for panel rehearing and rehearing *en banc* is unreported. It is reprinted in the appendix hereto, Pet. App. p. A-15.

BASIS OF SUPREME COURT JURISDICTION

Jurisdiction in the United States District Court for the District of Minnesota was pursuant to 28 U.S.C. § 1338(a). The Respondents appealed to the United States Court of Appeals for the Federal Circuit pursuant to 28 U.S.C. § 1295. The jurisdiction of this Court is invoked pursuant to 28 U.S.C. § 1254 and 28 U.S.C. § 2106.

STATUTORY PROVISIONS INVOLVED

35 U.S.C. § 271 provides in pertinent part

(a) Except as otherwise provided in this title, whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefore, infringes the patent.

STATEMENT OF THE CASE

A. Introduction

Petitioner Interactive Technologies, Inc. owns United States Patent No. 4,855,713 (the "'713 patent"), entitled "Learn Mode Transmitter." Pet. App. A-2 to A-3. The patent concerns wireless home security systems. *Id.* As with any patent case, an understanding of the patented technology as embodied in the patent claims is essential to comprehending the actions of the lower courts. Here, an understanding of terms such as "sensor," "transmitter," "learn mode," and "house code," and an understanding of the role played by the "unique identity code" and "non-duplication" claim elements is of fundamental importance to understanding the errors below.

In a wireless system, remote sensors detect events such as intrusion, fire, or other emergencies. The sensors connect to transmitters. Pet. App. A-2. The transmitters send radio signals to a central processing unit (CPU), which responds according to its programming. *Id.* at A-2 to A-3. Wireless systems differ from the more common hardwired systems that use physical wiring to connect the sensors to the CPU. *Id.* at A-3.

A major problem in wireless home security systems is the problem of "cross talk." Pet. App. A-3. A wireless system needs to detect reliably the signals from the various sensors throughout the house, while avoiding false alarms caused by inadvertent response to the signals from sensors installed in neighboring houses. Response to a signal in a neighboring house is called cross talk. *Id.*

Prior to the '713 patent, the industry attempted to solve the cross talk problem with the "house code" system. Pet.

App. A-3; *See also* Joint Appendix to Federal Circuit Briefs A6999 (hereafter Joint App.). Each CPU and sensor transmitter intended to report to that CPU would be programmed with a numerical code assigned to the house. Additionally, each sensor transmitter would also be assigned a zone number that allowed the CPU to determine which of the various sensors signaled it. The house code and zone numbers were typically programmed in the field by having a person manually set numerous small DIP switches in the CPU and sensors. Pet App. A-3; *see also* Joint App. A7017-19.

House code systems created numerous problems. Installers would frequently make mistakes in setting the DIP switches. House codes would be unintentionally duplicated as more people installed security systems. Duplication and mistakes led to false alarms and missed alarms. Pet. App. A-3; *see also* Joint App. A7002-03.

The pioneering invention claimed in the '713 patent scrapped the house code system entirely. Instead of using a code for the house in its entirety, an identification code is assigned to each sensor transmitter. This identification code is unique among all sensor transmitters in the sense that it is drawn from a huge pool of numbers. The pool is large enough so that no transmitter with the same identification is likely to be installed within signal range. These unique identification numbers are set by the sensor manufacturer at the factory. Pet. App. A-3. Factory programming ensures uniqueness and serves as the first step toward eliminating the human error inherent in field programming by the installer. *Id.*; *see also* Joint App. A7047-49.

This left the problem of programming each transmitter identification number into the CPU to which it was to report. The inventor of the '713 patent, Robert Brunius, created "learn mode" to solve the problem of programming the

identification codes into the system. Pet. App. A-3; *see also* Joint App. A7038-46. Learn mode eliminates the need for a person to manually program the identification code into the system. Joint App. A7038-46. In learn mode, the local CPU of the security system learns the identification number of each of its reporting sensor transmitters by having the sensor transmitter communicate that number to the CPU during a "learning" phase of installation. The CPU learns sensor transmitter identification numbers only when the transmission contains within it a signal of a predetermined condition. At trial, Petitioner's expert analogized this predetermined condition to the use of a "red rose" on a person's lapel as a signal to identify oneself to a stranger at a train station. Joint App. 7578-80. The use of this condition as a necessity of learning prevents the CPU from erroneously learning to respond to transmissions from neighboring houses, should a transmitter in a neighboring house send a communication while the CPU is in learn mode. Pet. App. A-4.

These benefits allowed products incorporating the features of the '713 patent to achieve a major position for Petitioner in the marketplace. Joint App. E16465. Respondents competed with their product entries that the jury found to infringe. Pet. App. A-6.

B. The Patent Claims

The claims at issue in this petition are claims 1 and 7. Claim 1, a method claim, begins with a preamble referring to the wireless transmitters and the "local security system controller"---the CPU---to be programmed with the identity of each transmitter:

> A method for programming a local security system controller with the identify of each of a plurality of

wireless transmitters to whose transmissions it is to respond, comprising....
Pet. App. A-4.

Step "(a)" of the claim, carried out by the manufacturer, calls for programming the "unique identity code" into each transmitter, and for including the code in each message sent by the transmitter:

> (a) programming a unique identity code into each of said wireless transmitters which identity code is transmitted with each transmission....
> *Id.*

Step "(b)" then calls for the CPU to be put in "program mode", the mode in which it is able to "learn" the transmitter ID:

> (b) establishing said system controller in a program mode....
> *Id.*

Step "(c)" refers to "inducing a predetermined transmission" from the transmitter whose ID is to be learned, a step carried out by the installer to cause the ID, accompanied by the "red rose" (as emphasized later in the claim), to be sent to the CPU:

> (c) inducing a predetermined transmission from one of said wireless transmitters....
> Pet. App. A-4.

Step "(d)" requires that whenever a signal carrying a transmitter ID is received by the CPU, the transmitter ID is temporarily stored in the CPU's memory, pending completion of the programming procedure:

(d) temporarily storing each received identity code as it is received by said system controller....

Id.

Step "(e)" sets out what the CPU does with the temporarily stored ID. First, it checks to be sure that the CPU is in its "program mode" and that the ID is accompanied by the "red rose", now particularized as a "predetermined alarm condition" (in the preferred embodiment, as seen above, this was the "tamper condition" induced by the installer as the "predetermined transmission" of step (c)):

(e) upon detecting said program mode and a predetermined alarm condition....

Id.

Continuing in step "(e)", if the CPU confirms that it is in program mode and that the red rose is present, the CPU then compares the temporarily stored ID just received to a "code table" of IDs previously learned and now more permanently stored:

comparing each received identity code at said system controller to a code table; and....

Id.

Finally, in step "(f)", if the compared ID is not already in the code table, it is added:

(f) writing the temporarily stored identity code into said code table, if not located.

Pet. App. A-5.

Step "(f)" avoids accidentally programming the same transmitter ID into the CPU a second time, well as the

unusual situation (given the "unique" nature of the ID) in which, in spite of the best efforts of the manufacturer, two transmitters with the same ID end up in the same house. Joint App. A7619-20; A7794-95; A7051; A7156-57; A7271.

Claim 7 is an apparatus claim that parallels claim 1. The only difference that affects this petition is in element (e) (corresponding to steps (e) and (f) of claim 1), which defines the red rose as "a predetermined one of said plurality of detectable conditions", referring back to a "plurality of conditions" which the preamble said the transmitters could transmit:

> (e) means at said system controller for comparing a received identity to a table of codes, upon detecting a program mode and a predetermined one of said plurality of detectable conditions, and writing said temporarily stored identity code into said table if not already present.
>
> Pet App. A-5.

The Federal Circuit's decision turned on its statement of the all-elements rule of the doctrine of equivalents and its application to claim 1, step (f) and claim 7, step (e). Pet. App. A-10 to A-12.

C. Respondents' Accused Devices

Just as in the '713 patent, Respondents' devices, marketed as the 5800 series transmitters and CPU's, threw out the house code system and factory programmed each transmitter with a unique 20-bit ID drawn from a pool of millions of numbers. Just as in the '713 patent, the 5800 CPU learns the unique transmitter IDs during an installation program mode, but only when they are transmitted with a red

rose "condition." Pet. App. A-6; *see also* Joint App. A7517-22; E18565; 18567.

To allow a few sensors share a single transmitter circuit, instead of installing an individual transmitter circuit for every single sensor, Respondent adds two more bits to the twenty bits already there in the transmitter, to identify which sensor is using the shared transmitter circuit in the particular transmission. Pet. App. A-6; *see also* Joint App. A7766-67. The twenty-two bits of the combined sensor and transmitter Ids uniquely identifies each sensor/transmitter circuit combination. Finally, just as in the '713 patent, the 5800, during learning, temporarily stores each received ID while it checks the CPU's code table to avoid learning duplicates. It is put into a code table if it has not previously been learned. Pet. App. A-6; *see also* Joint App. A7677-80.

D. Petitioner's Successful Patent Infringement Suit

At trial, the jury found that Respondents' products infringed the '713 patent. Pet. App. A-8. The district court interpreted the word "transmitter" narrowly, distinguishing and excluding the "sensor", even though it recognized that the '713 patent used the terms interchangeably. *Id.* at A-7; *see also* Joint App. A10-11. Given the court's construction, the district court granted summary judgment of no literal infringement, since the twenty bit "transmitter" portion embedded in the twenty-two bit sensor/transmitter ID is duplicated in the memory of the Respondents' system and the claims as construed by the district court require that the "transmitter ID" not be duplicated. The district court denied summary judgment on infringement under the doctrine of equivalents. Pet. App. A-6 to A-7.

The issue at trial was whether avoiding duplication of the 22-bit sensor/transmitter ID was equivalent to step (f) of

claim 1 and step (e) of claim 7, which recite that the temporarily stored "transmitter ID" is to be compared with the code table and added if not already there. *Id.* at A-7.

Petitioner presented extensive and overwhelmingly persuasive evidence on equivalence. Petitioner's expert showed that purported differences between the two methods of avoiding duplication was a matter of form rather than substance. Petitioner's expert also analyzed the two methods in terms of function, way, and result. He carefully took the jury through the function, way, and result for each accused product and each relevant claim limitation. He concluded that the 5800 performs the same function in the same way to achieve the same result. Joint App. A7634-39.

Petitioner presented convincing evidence on the breakthrough and pioneering character of the '713 patent. Joint App. A6864; A7153; A8652-53. The patent was granted on the first examination by the Patent and Trademark office, leaving it free of any prosecution history that could invoke arguments of estoppel. Petitioner's products embodying the patented features enjoyed tremendous commercial success, achieving annual sales of $70 million in 1996 following introduction in 1990. Joint App. E16465. Meanwhile, Petitioner's sales of products using the old house code system fell by half over the same period. Joint App. E16468. The district court instructed the jury that "pioneer" patents are entitled to a broad range of equivalents. *See* Jury Instruction 24A.

The jury accepted the credibility of Petitioner's evidence. It found that Respondents' 5800 products infringed the '713 patent under the doctrine of equivalents. The district court denied Respondents' motions for a new trial and judgment as a matter of law. Pet. App. A-8.

E. The Federal Circuit Reverses The Jury Verdict

In reviewing the district court's opinion, the Federal Circuit acknowledged that "[i]nfringement under the doctrine of equivalents is a question of fact, which we review for substantial evidence in the context of a jury trial." Pet. App. A-8. The Federal Circuit did not review the evidence considered by the jury, however, because it concluded that the all-elements rule of the doctrine of equivalents could not be satisfied as a matter of law. *Id.* at A-11 to A-12.

The all-elements rule states that the Federal Circuit "cannot uphold the finding of equivalent infringement unless every limitation in any construed claim at issue is found in the 5800 *at least equivalently*." Pet App. A-8 (emphasis added) (citations omitted).

The court began by reviewing the district court's claim interpretations. The Federal Circuit first upheld the district court's interpretation of the term "unique identity code" as "[a]n identifier which is assigned in a manner which assures that transmitters installed in the same operational area have only a remote likelihood of having the same identifier." Pet. App. A-9. The Federal Circuit next affirmed the district court's interpretation that in claim 1, step (a), that "the identity code the patent refers to is that of the transmitter . . . not the individual loops or inputs [of the transmitter]." *Id.* For step (f) of claim 1, the Federal Circuit upheld the interpretation that "this unique identity code was stored in the code table 'only when no pre-existing matching identity code exists.'" *Id.* The Federal Circuit further upheld the interpretation that the identify code of step (a) and step (f) have the same meaning. Thus, the unique identity code applies to the twenty-bit transmitter identification code, and not the two-bit sensor identification code or the twenty-two bit loop identification code. *Id.*

The Federal Circuit next analyzed infringement. Since the accused 5800 devices do not literally perform step (f) of claim 1 or step (e) of claim 7, in that they store without duplication a twenty-two bit loop identification code while allowing duplication of a twenty-bit transmitter identification code embedded within the twenty-two bit loop code, the Federal Circuit upheld the grant of summary judgment of no literal infringement. Pet. App. A-10.

To review infringement under the doctrine of equivalents the Federal Circuit needed to go beyond the literal meaning of the claims at issue---it had to compare the function, way, and result of each claim element with the function, way, and result of the accused devices to determine whether the differences were insubstantial. *See Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 40 (1997). The decision turned on the court's assessment of the function of step (f) of claim 1. As discussed *supra*, claim 1, step (f) claims the following:

> (f) writing the temporarily stored identity code into said code table, if not located.

The Federal Circuit held that the "function of claim 1, step (f)" was simply

> writing a transmitter identification code into a code table "if not located" as already in the code table. Pet. App. A-11.

Later in the opinion, the court restated the function of the step as

> ensur[ing] that duplicate transmitter identification codes are not stored.

Id.

Side by side comparison of the *claim language* with the court's statement of the *claim function* for purposes of analyzing equivalency is striking. It is clear that the court's statement of function merely restates the literal claim language. As the court saw it, the step had no purpose other than to carry out its literal language.

The court went on to hold that there was no infringement by equivalents as a matter of law. The court concluded that "the function of not storing duplicate transmitter identification codes is altogether missing from the 5800." Pet. App. A-11. The limitation was missing because, in the view of the court, the "substitute elements [in the 5800 products], alleged to be equivalent, actually performed a distinctly different function." Pet. App. A-9. The court used the purported purpose of step (f) of claim 1 in the '713 patent to distinguish the 5800 series. "The 5800, by contrast, clearly permits the storage of duplicate transmitter identification codes. While the 5800 does not permit the storage of duplicate loop identification codes, this feature does not 'function' to ensure that duplicate transmitter identification codes are not stored." Pet. App. A-11. This means that the operation of the 5800 series is "functionally distinct and thus not equivalent as a matter of law." *Id.*

Thus, the Federal Circuit never assessed the evidence presented at trial concerning function, way, and result of the patent claims and accused devices. Starting and ending with the literal language of the claims, the court employed a process of circular reasoning to conclude there was no equivalence as a matter of law. First, it held that the function of the claim element at issue for purposes of equivalents analysis was restricted to the literal meaning of its language. Based on that holding, it concluded that the only thing that is not to be

duplicated in service of the overall non-duplication function of the claim element is the "transmitter" ID code. That limitation was not literally satisfied because in the accused devices the "transmitter ID code" portion of the equivalent loop ID code can be duplicated. Finally, since it was not literally satisfied, it could not be satisfied by equivalents either. Finding any function other than storing non-duplicate transmitter IDs would vitiate the claim element. *See generally* Pet. App. A-8 to A-12.

When it determined the function of the claim, the Federal Circuit failed to consider the claim in the context of the '713 invention. The Federal Circuit failed to evaluate the expert testimony from the trial. *See* Statement of the Case, *supra.* It purported to determine function based solely on the literal language of the specific claim limitation, and no other source. The Federal Circuit never explained how this purely linguistic and rigidly formal approach differs from literal infringement analysis. It did not explain how there could ever be infringement by equivalents if there is a semantic distinction between the claim language and the accused device.

REASONS FOR GRANTING THE WRIT

A. The Supreme Court Should Reverse The Federal Circuit Because Its Statement And Application Of The All-Elements Rule Of The Doctrine Of Equivalents Violates Supreme Court And Federal Circuit Precedent

1. The Decision Conflicts With Supreme Court Precedent

a. The Decision Conflicts With *Warner-Jenkinson*

In *Warner-Jenkinson*, the Court announced the continued viability of the doctrine of equivalents, previously addressed by the Court in *Graver Tank*. *Warner-Jenkinson Co., v. Hilton Davis Chemical Co.*, 520 U.S. 17, 21 (1997). The case holds that "the doctrine of equivalents must be applied to individual elements of the claim, not the invention as a whole." *Id.* at 29. The Court endorsed the Federal Circuit approach to equivalence as a question of fact and thus generally for the jury. *Id.* at 38.

The all-elements rule provides a legal limitation to the doctrine of equivalents. Equivalence is unavailable as a matter of law only "if a theory of equivalence would entirely vitiate a particular claim element." *Id.* at 39 fn 8. The decision makes clear this occurs only if the accused device contains elements that are *neither* identical nor equivalent to the patented device. *Id.* at 40. The Court stated the all-elements rule as part of a discussion of the legal limitations to the doctrine of equivalents, including summary judgment and prosecution history estoppel. The opinion clearly does not seek to create a new or altered threshold to the doctrine of equivalents before submitting the issue to the jury. *Warner-Jenkinson*, at 39 fn. 8.

The Court rejected any particular "linguistic framework" for equivalents analysis. *Id.* at 40. Instead, the Court simply articulated "the essential inquiry: Does the accused product or process contain elements identical or equivalent to each claimed element of the patented invention?" *Id.*

The Court required lower courts to look at more than the literal meaning of claim element language in assessing equivalence. "An analysis of the *role played* by each element *in the context of* the specific patent claim will thus inform the inquiry . . . ." *Warner-Jenkinson* at 40. Thus, an equivalents analysis must place the patent claim into a larger context than

its own words. Any equivalents analysis that begins and ends with the claim language has failed to follow the Court's directive. The Federal Circuit's decision in the present case failed to consider anything more than the literal scope of the claim limitations and ignored the context of the claim.

In holding in the present case that a claim element was missing, or vitiated, the Federal Circuit adopted a view of equivalency that vitiates the doctrine itself and finds no support in *Warner-Jenkinson*. The panel's inquiry into the "role played" by claim elements 1(f) and 7(e) of the '713 patent went no further than the literal language of those claim elements. *See* Pet. App. A-8 to A-12. The Federal Circuit held that the "function" performed by a claim limitation calling for non-duplication of transmitter identity codes was simply "to ensure that all stored transmitter identification codes are different." Pet. App. A-11. This "function" simply restates the literal claim language.

In testing for compliance with the all-elements rule the Federal Circuit applied its restatement of the literal claim language to the accused devices, even though infringement under the doctrine of equivalents was at issue. Such an approach means that there is no permissible degree of variance from the literal scope of the claim language for purposes of ascertaining potential equivalency. The Federal Circuit has created a "linguistic framework" that denies application of the doctrine of equivalents if there is any semantic inconsistency between the claims and the accused device. The Federal Circuit failed to inquire into the essential functions of the invention and the role played by the claim elements at issue in the context of the patent claim. If nothing else, the mandate of *Warner-Jenkinson* is that courts must look beyond the literal scope of claim language to determine the "central function" of an element in the context of the patent claim as a whole, keeping in mind the constraint of the all-elements rule.

The effect of this linguistic strait jacket is to significantly narrow, if not completely destroy the doctrine of equivalents as a theory of patent infringement. In *Warner-Jenkinson*, the petitioner asked the Court to eliminate the doctrine of equivalents. *Id.* at 21. The Court declined, and stated that "the various policy arguments . . . are thus best addressed to Congress." *Warner-Jenkinson* at 28. Less than three years after the decision, the doctrine of equivalents faces the prospect of being narrowed out of existence. This Court should intervene and correct the Federal Circuit's erroneous view of the doctrine before that happens.

Performing an analysis of the function performed by elements 1(e) and 7(f), under the approach outlined in *Warner-Jenkinson,* results in upholding the jury verdict. Petitioner does not contest that, under the district court's claim construction which the Federal Circuit viewed as correct, a limitation of the claim in suit has been changed in the accused devices. Pet. App. A-9. The unique identity code of limitations 1(f)/7(e) has been changed to a loop identity code, a portion of which is duplicated. *Id.* This change is dispositive of literal infringement. Claim elements 1(f) and 7(e) are not literally infringed because the transmitter identity code portion of Ademco's non-duplicated code cannot literally satisfy the claimed "if not located" or "if not already present" aspect of claim elements 1(f) or 7(e). *Id.* at A-10.

The inquiry under an equivalents infringement is then whether the change is so insubstantial and so immaterial that the central function of this claim element---non-duplication of a transmission to which the controller will respond when armed---is identical. *Cf. Warner-Jenkinson* at 40. The answer is readily apparent from the claims in issue, when studied as a whole.

The preamble to claim 7, for example, states that what is being claimed is an "apparatus for identifying to said system controller to which received transmissions it is to respond." Pet. App. A-5. The function of the non-duplication element, seen in context, is to store without duplication the transmissions to which the system controller is to respond. In the claimed system, the system controller responds to and does not duplicate the unique identity code that literally corresponds to the transmitter identity code of 20 bits. Pet. App. A-3 to A-4.

In the Respondents' accused devices, the system controller responds to and does not duplicate the loop identity code of 22 bits. It is true that the Respondents' system is capable of duplicating a transmitter identity code as part of its non-duplicated loop identity code. It is also true, however, that the Respondents' system does not respond to a partial code---it responds to and does not duplicate the equivalent loop identity code. Pet. App. A-8 to A-10.

The claim elements are not completely eliminated because in the context of the claim the accused loop identity code---the substitute element---performs the identical function to the claimed transmitter identity code: it is the transmission to which the system controller responds. The loop identity code is received at the system controller, compared to a code table, and then written into the code table if not already present without the possibility of duplication. Pet. App. A-6.

What all of this means is that the accused devices satisfy the all-elements rule as a matter of law, and a jury should have been allowed to decide whether there was equivalency in fact. Overwhelming evidence presented to the jury proved that in the Respondents' system there is no duplication of the unique identity code to which the system controller responds. *See*

Joint App. A8921-22. Ambiguity is thus avoided in precisely the same way as in the claimed invention.

Petitioner urges the Supreme Court to reverse the Federal Circuit, and reaffirm, for this and future cases, that it is the law of the United States that courts are to look beyond the literal meaning of patent claim language to determine the role played by a claim element in assessing compliance with the all-elements rule and in determining the substantiality of difference between claimed and accused elements. District courts and the Court of Appeals for the Federal Circuit should not be permitted to construct barriers to equivalence that are merely linguistic or that adhere slavishly to literal meaning.

b. The Decision Conflicts With Graver Tank

The Federal Circuit decision in the present case conflicts with the doctrine of equivalents as established by *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 339 U.S. 605 (1950). The failure to follow *Graver Tank* represents one of the most serious errors made by the Federal Circuit in this case.

Graver Tank established the "modern contours" of the doctrine of equivalents. *See Warner-Jenkinson* at 21. It calls for an analysis based firmly in "the particular circumstances of the case." *Graver Tank* at 609. The court stated that "equivalence, in the patent law, is not the prisoner of a formula and is not an absolute to be considered in a vacuum." *Id.* The Court identified the type of evidence that must be considered:

> Proof can be made in any form: through testimony of experts or others versed in the technology; by documents, including texts and treatises; and, of course, by the disclosures of the prior art. Like any

other issue of fact, final determination *requires a balancing of credibility, persuasiveness and weight of evidence*. *Id.* at 609-10. (emphasis added).

In *Graver Tank*, the patentee claimed a welding flux that included a combination of alkaline earth metal silicate and calcium fluoride. *Id.* at 610. The accused infringer's composition used manganese silicate---a silicate, but not an earth metal silicate. Therefore, the claim was not literally infringed. *Id.*

The issue then was whether "under the circumstances of this case, and in view of the technology and the prior art . . . the change was so insubstantial that the trial court's invocation of the doctrine of equivalents was justified." *Id.* In assessing the trial court's determination, the Court considered the evidence in the trial record: testimony from chemists regarding the similarity of the claimed and accused fluxes; testimony from a metallurgist regarding the purpose of the elements in welding fluxes; and disclosures of prior art in the patent itself. The Court noted that the trial court had the responsibility for evaluating the evidence. *Id.* at 610-11. The Court referred to the duration of the trial, which included significant amounts of expert testimony and scientific demonstrations. The Court concluded that the record supported the trial court's determination that manganese silicate was an effective substitute for the claimed ingredients. *Id.* at 611-12.

If *Graver Tank* came before the Federal Circuit today, the patentee would not fare as well. Under the all-elements as applied in *Interactive Technologies, Inc v. Pittway*, the Federal Circuit would begin and end its inquiry into equivalence with the literal language of the claim. The Federal Circuit would hold that the "function" of a claim calling for addition of an alkaline earth metal silicate was simply to accomplish the

addition of an alkaline earth metal silicate. *Cf.* Pet. App. A-11. It would then observe that the accused device added no alkaline earth metal silicate. It would than conclude that any finding of infringement by equivalents would "vitiate" or "eliminate" the claimed addition of alkaline earth metal silicate. As a matter of law there could be no infringement. *Cf.* Pet. App. A-11.

The literalist approach outlined above that would lead on the *Graver Tank* facts to the opposite result cannot be what the Court contemplated in *Warner-Jenkinson*. An approach holding that the "function" of the claim calling for storage without duplication of a transmitter ID was simply to store the transmitter ID without duplication says nothing about the role played by that claim element in the context of the patent claim. Since the accused device did not literally avoid duplication of a transmitter ID, there was no literal infringement, and *for this same reason* there was no infringement by equivalents, since equivalent infringement would vitiate the claim and violate the all-elements rule. The Federal Circuit did not even reach the evidence before the trial court. This evidence provides a context and more informed meaning for the claimed step of storing a transmitter ID without duplication, just as *Warner-Jenkinson* contemplates. The *Graver Tank* court carefully catalogued such evidence considered by the trial court, while declining to "essay an independent evaluation." *See Graver Tank* at 611. Failure to consider this evidence, and reliance solely on the literal patent claim language, constitutes failure to follow the *Graver Tank* precedent.

The fact that the Federal Circuit is using a method that would overturn such longstanding, respected, and controlling precedent underscores the error of the court's approach to the doctrine of equivalents. This Court should intervene. It

should reverse the Federal Circuit, and remand for reconsideration consistent with controlling precedent.

2. The Decision Exemplifies The Federal Circuit's Failure To Carry Out The Supreme Court's Directive To Develop Doctrine Of Equivalents Law Through Orderly Case By Case Determinations

In *Warner-Jenkinson*, the Supreme Court directed the Federal Circuit to develop the doctrine of equivalents "in the orderly course of case-by-case determinations." 517 U.S. at 40. The opinion by the Federal Circuit in *Interactive Technologies, Inc. v. Pittway* demonstrates that the Federal Circuit is failing to follow that mandate. Properly fulfilling that mandate requires the Federal Circuit to carry out three tasks: (1) The Federal Circuit must follow Supreme Court and Federal Circuit precedent; (2) the Federal Circuit must balance the tension between the goals of the patent claiming system and the goals of the doctrine of equivalents, and (3) the Federal Circuit must maintain respect for the right to a jury trial and the role of juries in fact-finding.

As the preceding sections demonstrate, the Federal Circuit has failed to follow Supreme Court precedent. Subsequent sections demonstrate it has failed to follow its own precedent. Such lack of regard for settled decisions is the epitome of failure to develop the law on an orderly case-by-case basis.

The Federal Circuit has also failed to balance the goals of patent claiming and the doctrine of equivalents. The patent laws require "distinctly claiming the subject matter which the applicant regards as his invention." 35 U.S.C. § 112. The system of patent claiming provides certainty and notice to the public. By delineating what is patented from what is not

patented, the public is notified of the extent of its property rights. *Compare Warner-Jenkinson* at 29 (noting tension between doctrine of equivalents and notice function of patent claiming) *with Warner-Jenkinson* at 30 (expressing confidence that the doctrine of equivalents will not "vitiate the central functions of the patent claims themselves").

The doctrine of equivalents operates not to expand patent claims, but to give them their full and proper effect. The doctrine of equivalents reflects a recognition that words are an imprecise vehicle with which to describe an invention. The doctrine assures that a patent is not defeated by an infringer who evades the literal language of a patent claim while making insubstantial changes to claimed elements. *See Graver Tank* at 607. That is why infringement may be found either literally or by equivalents.

Out of its apparent concern that excessive application of the doctrine would undermine the notice requirement of patent claiming, the Federal Circuit has distorted the law of the doctrine of equivalents. The Federal Circuit has noted the danger that the all-elements rule, improperly applied, could "swallow" the doctrine of equivalents. *Ethicon Endo-Surgery, Inc. v. United States Surgical Corp.*, 149 F.3d 1309, 1317 (Fed. Cir. 1998). By amplifying the role of the all-elements doctrine, the Federal Circuit no longer treats infringement as a question of fact, subject to the normal control by the court. The Federal Circuit has elevated the all-elements rule of the doctrine to a nearly insurmountable hurdle for patentees. The Supreme Court in *Warner-Jenkinson* did not direct the Federal Circuit to exercise special diligence with respect to the doctrine of equivalents; it merely directed the Federal Circuit to continue to develop the doctrine. 520 U.S. at 40.

Instead, the Federal Circuit in its recent cases has endangered the viability of the doctrine by converting the all-

elements rule of the doctrine of equivalents into no more than a literal infringement analysis. This linguistic formalism, in addition to being contrary to the precedents of this Court, comes at the expense of patent holders and of thorough judicial analysis. Patent claims are not merely a recitation of structure or an unconnected set of operations. The claims must be viewed in context to understand interaction between components of the invention. This is not merely an aspirational goal of patent jurisprudence. As articulated in *Warner-Jenkinson* and *Graver Tank*, it is the law that controls each equivalents inquiry undertaken by the courts.

The Court should not hesitate to intervene now, even though it heard *Warner-Jenkinson* in the October 1996 term. The Supreme Court can properly take an active role in the development of patent jurisprudence, just as it has in other areas of the law, such as search and seizure law. Patent laws provide a significant incentive for technical innovation, and technical innovation has been a key to economic growth for this nation. *See Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 480-81 (1974); *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 150-51 (1989). The Federal Circuit is the only appellate court, other than the Supreme Court, that hears cases from every federal judicial district. It has been described as a "court of last resort" for patent cases. *See, e.g.*, Matthew F. Weil and William C. Rooklidge, *Stare Un-Decisis: The Sometimes Rough Treatment of Precedent in Federal Circuit Decision-Making*, 80 J. Pat. & Trademark Off. Soc'y 791, 805 (1998).

Since the Federal Circuit has exclusive jurisdiction over patent appeals, *see* 28 U.S.C. § 1295, there is no possibility of a split between circuits, one of the indicia for granting certiorari. *See* Sup. Ct. R. 10(a). Intervention is appropriate when there has been a significant distortion in the application of the patent laws, unjustified by precedent or

legislation. The decision below presents such a case. *See Cardinal Chemical Co. v. Morton Int'l, Inc.*, 508 U.S. 83, 89 (1993) (stating that the Court granted *certiorari* because rules applied by the Federal Circuit in patent cases are "a matter of special importance to the entire Nation"); *see also* Sup. Ct. R. 10(c) (stating that a decision on an important question of federal law in conflict with Court precedent justifies review).

3. The Decision Conflicts With Federal Circuit Precedent

The Federal Circuit's decision in *Corning Glass* illustrates a proper application of the doctrine of equivalents in view of Supreme Court precedent. *See Corning Glass Works v. Sumitomo Electric U.S.A.*, 868 F.2d 1251 (Fed. Cir. 1989). Had the Federal Circuit followed the decisional framework of *Corning Glass*, the jury verdict in favor of Petitioner would have been affirmed by the Federal Circuit.

In *Corning Glass*, the court held that "an equivalent must be found for every limitation of the claim somewhere in an accused device, but not necessarily in a corresponding component." *Corning Glass* at 1259. The patent claimed an optical wave guide with a *positive* dopant in the *core* of the wave guide. *Id.* at 1254, 1256 (emphasis added). The dopant created a differential in the refractive index between the core and the cladding of the wave guide. *Id.* at 1255. The accused device had a *negative* dopant in the *cladding* of the wave guide. This negative dopant acted to create the differential refractive index. *Id.* at 1259 (emphasis added).

Despite the fact that the patent disclosed only positive core-based dopants, the accused device was held to infringe under the doctrine of equivalents. *Id.* at 1261. The all-elements rule was not violated by the absence of positive dopant. *Corning Glass* at 1259. The court reached this result

because it did not merely articulate the purpose of a positive dopant as the existence of a positive dopant. It looked to the larger reason for the dopant---creating a differential refractive index. In this context, an oppositely charged dopant in a different location in the waveguide provided an equivalent to the positive dopant limitation. *See id.* at 1259-61.

Application of the all-elements rule in its present form at the Federal Circuit would produce a different result. Such application would not take account of function beyond the claim language itself. The court would simply conclude that the function of positive dopant is to create the presence of positive dopant. Any accused device that lacks positive dopant would vitiate the claim element of a positive dopant if found to infringe. Therefore, under the rule applied by the Federal Circuit in *Interactive Technologies, Inc. v. Pittway*, there would be no infringement as a matter of law. *Cf.* Pet. App. A-11.

B. This Case Satisfies The Requirements For A Grant Of Certiorari, Vacation Of The Federal Circuit's Judgment, And Remand To The Federal Circuit

1. The Rehearing In *Festo* May Determine The Result Of The Pending Litigation

a. The Panel Decision Would Compel Upholding The Jury Verdict In *Interactive Technologies, Inc. v. Pittway*

In *Festo*, the court held the all-elements rule was satisfied by an accused structure even though a claim element required sealing rings at *opposite ends* of a mounting member and the accused structure was a two-way sealing ring situated at *one end* of the member. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 172 F.3d 1361, 1370-71, (Fed. Cir. 1999),

reh'g en banc granted, judgment vacated by -- F.3d --, 51 USPQ2D 1959 (1999) (hereafter *Festo I*). Although the claim element was not literally satisfied because the two-way ring could never literally satisfy the "opposite" limitation, the court held that the substituted sealing ring performed the identical function, and thus the claim element was not completely eliminated. *Festo I* at 1371. In so holding, the court followed the rules established in *Warner-Jenkinson* for determining compliance with the all-elements rule. The court first noted that it "discern[ed] in *Warner-Jenkinson* no basis for believing that the Court intended to erase [the] wealth of precedent" since the *Pennwalt* decision that the all-elements rule "does not eliminate access to equivalency in all of the possible circumstances in which . . . a limitation is changed." *Id.* at 1369-70.

The *Festo I* court divided equivalents analysis into two components.

> "Compliance with the all-elements or all-limitations rule is determined at the threshold of the equivalency analysis, based on whether each claim element has a counterpart in the accused device or process, as informed by precedent. Compliance with the all-elements rule is a distinct inquiry from that of equivalency in fact; it is a determination of the relationship between the combination claimed and the components of the accused device or process, element by element."
> *Id.* at 1370.

Reviewing compliance with the all-elements rule is a "question for the court, first identifying the claim elements . . . and then determining the correspondence of these elements, or limitations, with the components or steps of the accused device or process." *Id.*

The court reviewed the district court's determination that the all-elements rule was not violated. In applying the all-elements rule with respect to the "opposite ends" claim limitation for the sealing rings, the court stated: "*Warner-Jenkinson* teaches that it is appropriate to inquire into the 'role' of the pair of sealing rings, and to compare that role with the role of the substituted two-way sealing ring." *Festo I* at 1370. The court held that "the role of the pair of sealing rings, as stated in the claim, is to effect a fluid-tight seal with the cylinder." *Id.* at 1371. The all-elements rule is met, because "[t]he claimed pair of sealing rings has not been eliminated in its entirety, but has been substituted with a single two-way sealing ring that *fully preserves the function* stated in the claim." *Id.* (emphasis added).

Applied to the present case, the analysis in *Festo* would result in upholding the jury verdict. The court would apply the all-elements rule as a threshold to the equivalents analysis. The court would inquire into the role played by the claimed elements, and the accused infringing elements. The role is seen in the context of the invention. As described *supra*, that role is understood to mean non-duplication of a transmission to which the controller will respond when armed. The 5800 devices clearly perform that role through substitute elements. The threshold legal inquiry is satisfied, and the jury would be permitted to decide equivalence as an issue of fact.

b. The *Festo* Panel Decision Has Been Vacated Pending Rehearing *en banc* And May Determine The Outcome Of *Interactive Technologies, Inc. v. Pittway*

On rehearing of *Festo I en banc*, one of the questions presented is as follows:

> Would a judgment of infringement in this case violate *Warner-Jenkinson's* requirement that the application of the doctrine of equivalents "is not allowed such broad play as to eliminate [an] element in its entirety," 520 U.S. at 29. In other words, would such a judgment of infringement, post *Warner-Jenkinson*, violate the "all elements" rule?

Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., -- F.3d --, 51 USPQ2D 1959 (1999) *granting reh'g en banc and vacating* 172 F.3d 1361.

This is precisely the issue that proved dispositive in the present case. The *en banc* rehearing may well adopt the panel's approach to the doctrine of equivalents, or even expand upon it. Either outcome would compel a different result in the present case. In any event, the grant of rehearing constitutes a legal development that may decide the issues in Petitioner's case.

2. A Grant, Vacate, And Remand Order Improves The Fairness And Accuracy Of the Judicial Outcome in *Interactive Technologies, Inc. v. Pittway*

A grant of a petition for a writ of certiorari, vacation of the lower courts judgment, and a remand to the lower court (a "GVR"), occurs when

> intervening developments, or recent developments that we have reason to believe the court below did not fully consider, reveal a reasonable probability that the decision below rests upon a premise that the lower court would reject if given the opportunity for further consideration, and where it appears that such

> a redetermination may determine the ultimate outcome of the litigation.
> *Lawrence v. Chater,* 516 U.S. 163, 167 (1996).

A GVR promotes justice by avoiding different outcomes between cases that have similar issues. *Id.* at 168; *see also Stutson v. United States,* 516 U.S. 193, 197 (1996) ("a GVR order both promotes fairness and respects the dignity of the Court of Appeals by enabling it to consider potentially relevant decisions and arguments that were not previously before it").

Both the *Festo* case and the present case pose identical issues: whether in applying the all-elements rule it is necessary to identify the role played by each claim element by using the context of the specific patent claim. In *Festo*, the court considered the context of the entire patent in identifying the role of a claim element. In the present case, the panel considered only the literal language of the patent claims. Both approaches cannot be the law.

Petitioner's case is still pending, albeit before this Court, while the Federal Circuit considers a case that may dispose of it. It would be unjust to conclude this case on the eve of creation of new precedent that could restore the jury verdict to Petitioner.

A typical situation for a GVR order is a grant of a petition for writ of certiorari by the Supreme Court in one case, while a case presenting a common issue seeks a writ of certiorari at the same time. The second case is often granted a GVR, so that the lower court may consider the impact of the Supreme Court's ruling in the first case. *See Lawrence* at 180 (Scalia, J., dissenting) (observing that "[t]his is undoubtedly the largest category of 'GVRs' that now exists"). GVRs are not limited to Supreme Court review of a similar case,

however. *See Id.* at 166-67 (noting that GVRs are granted based "in light of a wide range of developments, including our own decisions, State Supreme Court decisions, new federal statutes, administrative reinterpretations of federal statutes . . . ." (citations omitted)). The grant of an *en banc* rehearing by the Federal Circuit in *Festo* presents an analogous situation to a grant of certiorari by this Court in a case with a common issue. The *en banc* panel will establish precedent for the Federal Circuit. Therefore, the Federal Circuit should have an opportunity to reconsider Petitioner's appeal, in light of the precedent it will create in *Festo*.

CONCLUSION

For the reasons stated above, the petition for a writ of certiorari should be granted, or alternatively, a grant, vacate, and remand order should issue.

Respectfully submitted,

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PETITIONER'S APPENDIX

NOTE: Pursuant to Fed. Cir. R. 47.6, this disposition is not citable as precedent. It is a public record. The disposition will appear in tables published periodically.

United States Court of Appeals for the Federal Circuit

98-1464

INTERACTIVE TECHNOLOGIES, INC.,

Plaintiff-Appellee,

v.

PITTWAY CORPORATION and
ADEMCO DISTRIBUTION, INC.,

Defendants-Appellants.

Decided: June 1, 1999

Before RICH, MICHEL, and LOURIE, Circuit Judges.

MICHEL, Circuit Judge,

DECISION

Defendants-Appellants Pittway Corporation ("Pittway") and Ademco, Distribution, Inc. ("Ademco") (together "the Pittway parties") appeal from the judgment of the United States District Court for the District of Minnesota, entered in

accordance with a jury verdict, that their wireless security systems infringed under the doctrine of equivalents Interactive Technology, Inc.'s ("Interactive's") United States Patent No. 4,855,713 (the "'713 patent"). See Interactive Techs., Inc. v. Pittway Corp., No. 3-95-771 (D. Minn. May 22, 1998) (Amended Order for Judgment). The Pittway parties further appeal from the portions of the judgment that the claims of the '713 patent were not invalid for obviousness and that the '713 patent was not unenforceable due to inequitable conduct. See id. In addition, the Pittway parties appeal the award of lost profits damages of $31,480,585. See id. Interactive's untimely filed cross-appeal was previously dismissed by this court. This appeal was submitted for our decision following oral argument on March 4, 1999. Because we conclude that there was no evidence presented at trial that certain limitations of the claims of the '713 patent were met by the accused devices, we must overturn the liability judgment and so we reverse-in-part. However, because the jury's determinations and its underlying fact findings with respect to invalidity and unenforceability are supported by substantial evidence and because the court's adoption of those determinations and findings with respect to unenforceability is not clearly erroneous, we cannot disturb this portion of the judgment and hence also affirm-in-part. As we find no liability, the damages issues are not reached.

DISCUSSION

I.

This appeal concerns "wireless" home security systems. Such systems are produced by Interactive and the Pittway parties and include a central processing unit (a "CPU") and remote sensors to sense an intrusion, fire, or other emergency conditions. In wireless systems, the sensors are connected to transmitters, which send radio signals to the CPU. This

differs from the more common "hardwire" systems, which use wiring to connect the sensors to the CPU. In a wireless system, the CPU must be programmed to respond to the various sensors throughout the house, and not to respond to signals being transmitted from neighboring houses (a problem known as crosstalk"). The most common prior art technique for avoiding crosstalk was to program the CPU and the sensors with a "house code," indicating that the signal was coming from that specific house, and also a "zone number," indicating where in the house the signal was coming from (e.g., the front door). The house code and the zone numbers were typically programmed in the field by having the installer set an array of small, code-selection switches called "DIP" switches. Using an instrument such as a small screwdriver or paper clip, each DIP switch could be set either in an up or down position and the number of DIP switches in the array thus determined the size of the pool of possible codes. Problems with this arrangement were that house codes were sometimes still duplicated and that the practice of having installers set the DIP switches in the field magnified the risk of human error.

The invention of the '713 patent, entitled "Learn Mode Transmitter," attempted to counter these problems by not using house codes and zone numbers, but instead assigning different identification codes to each transmitter. As described in the patent, "[e]ach transmitter's code is randomly programmed at the factory from an essentially infinite pool of numbers which code is thereafter transmitted with each transmission." '713 pat., col. 2, II. 42-45. By drawing the identification code from such "an essentially infinite pool of numbers", the risk of crosstalk was made extremely improbable. Upon installation into the home, a "learning" or "programming" phase is undertaken whereby the local CPU "upon hearing each transmitter's identity code for the first time writes the code into a storage location in its memory which is thereafter accessed prior to responding to any later

received transmissions." '713 pat., col. 2, II. 47-50. To prevent the CPU from learning a code from a sensor transmitter that was sending signals from another home during the learning phase, the claimed method and apparatus require that part of the signal include additional codes that the '713 patent variously describes as "a predetermined alarm condition" (claim 1) or a "plurality of detectable conditions" (claim 7). '713 pat., col. 10, II. 1-2, 55. In the preferred embodiment, this additional code is the signal sent by the transmitter when the sensor is being tampered with. See '713 pat., col. 4, II. 6-21; col. 9, II. 26-39. The purpose of using this additional code was that, although a neighboring home might be transmitting signals during the learning phase, such signals were unlikely to include tamper signals and thus the requirement of the additional code prevented the CPU learning the identification codes of these stray signals.

The claims of the '713 patent pertinent to this appeal are claims 1, 7 and 9. They claim:

> 1. A method for programming a local security system controller with the identity of each of a plurality of wireless transmitters to whose transmissions it is to respond, comprising:
> (a) programming a unique identity code into each of said wireless transmitters which identity code is transmitted with each transmission;
> (b) establishing said system controller in a program mode;
> (c) inducing a predetermined transmission from one of said wireless transmitters;
> (d) temporarily storing each received identity code as it is received by said system[] controller;
> (e) upon detecting said program mode and a predetermined alarm condition, comparing each received identity code at said system controller to a code table; and

(f) writing the temporarily stored identity code into said code table, if not located.

. . . .

7. In a security alarm system having a system controller and a plurality of wireless transmitters operative to transmit at radio frequencies a plurality of conditions, apparatus for identifying to said system controller to which received transmissions it is to respond, comprising:
(a) means for permanently storing a unique identity code in each of said plurality of transmitters which is transmitted with each transmitter transmission;
(b) means for temporarily storing each received identity code at said system controller;
(c) means for operating said system controller in a program mode and an armed mode;
(d) means at said system controller for detecting the condition inducing each received transmission;
(e) means at said system controller for comparing a received identity code to a table of codes, upon detecting a program mode and a predetermined one of said plurality of detectable conditions, and writing said temporarily stored identity code into said table if not already present.

. . . .

9. Apparatus as set forth in claim 7 wherein during an armed mode said system controller compares each temporarily stored identity code to said identity code table and responds only if a correspondence is detected.

'713 pat., col. 9, I. 53 to col. 10, I. 6; col. 10, II. 37-57, 61-64.

The Pittway parties' systems that were found to infringe these claims equivalently are marketed as the VIA and VISTA series CPUs and the 5800 series transmitters (collectively, "the 5800"). The 5800 uses transmitters attached to as many as four sensors. In the 5800 system, each transmitter has its own twenty-digit transmitter identification code and each sensor has its own two-digit sensor identification code. These codes combine to form a twenty-two digit code termed the "loop identity code."

Depending on the particular system, the 5800 requires that the loop identity code be transmitted either two or four times during its learning mode. In the systems that require only two transmissions, the CPU compares the loop identity code to those codes already in its table of codes. If the loop identity code is not already in the table, the CPU records it there. If it is already present, the CPU discards it. In the four-transmission system, the CPU matches the twenty-digit transmitter identification codes from the first two transmissions and then determines from which two-digit sensor the transmissions emanated. Then, if the twenty-two digit loop identity codes from the last two transmissions match those of the first two transmissions, the CPU writes the loop identity code into the table. However, as with the two transmission system, if the loop identity code is already written into the table, the CPU will discard the incoming code.

Interactive filed suit on August 16, 1995, accusing the Pittway parties of infringing claims 1, 7 and 9 of the '713 patent. On March 28, 1997, the Pittway parties moved for summary judgment of no literal or equivalent infringement, which motion was stayed pending a Markman hearing and ruling. The district court issued its Markman ruling on October 24, 1997, construing various terms in the claims. On December 2, 1997, the court granted the Pittway parties' motion for summary judgment of noninfringement with respect to literal infringement, but denied the motion with

respect to equivalent infringement. The court ruled that the Appellants' 5800 system did not literally infringe claim 1 of the '713 patent because the 5800 system does not learn by using a message which triggers an armed system controller to sound an alarm. Under claim 1 of the '713 patent, however, learning is accomplished "upon detecting" "a predetermined alarm condition," which was interpreted in the Markman ruling to mean learning by "a message that has been determined in advance which triggers an armed system controller to sound an alarm." With respect to claim 7, the court also held that there could be no literal infringement because the 5800 system does not learn a transmitter identification code "upon detecting a predetermined one of said plurality of detectable conditions." Rather, the 5800 system learns based upon a pattern of individual events, not "one," single condition. In addition, the court held that there could be no literal infringement of claim 7 because, whereas the '713 patent requires that learning was accomplished as a result of each transmitter having its own unique identification code, the 5800 system can learn the identification code of each transmitter several times if the transmitter is attached to a sensor each with its own identification code. Thus, the court concluded that the storage systems of the '713 patent, which requires a "unique identity code" for each transmitter, and the 5800 system differ because the 5800 system can store multiple, identical transmitter codes, and that, consequently, there could be no literal infringement of claim 7. Moreover, because claim 9 is dependent from claim 7, the court further held that there could be no literal infringement of claim 9.

The court denied the Pittway parties' motion, however, with respect to infringement under the doctrine of equivalents. Without being specific, the court reasoned that Interactive "has presented substantial evidence which illustrates that material issues of fact exist regarding equivalency of Claims 1 and 7 to [Appellants'] product." Interactive, slip op. at 13 (Dec. 2, 1997).

The jury trial on the claim of equivalent infringement and the defenses of obviousness and unenforceability commenced on January 5, 1998. On March 9, 1998, the jury returned its special verdicts and judgment was entered in accordance with all the verdicts for Interactive on May 22, 1998. Specifically, the jury found that the 5800 series products included equivalents of steps (a), (e) and (f) of claim 1, and steps (a) and (e) of claim 7, of the '713 patent and, further, that those products equivalently infringed claim 9 of the '713 patent. The jury also found the patent was not proven invalid as obvious in light of the prior art and that it was likewise not proven unenforceable for inequitable conduct. The jury then found lost profits damages of $31,480,585 on sales it concluded that Interactive would have made and reasonable royalty damages of $4,473,759 at a rate of 6% on sales by the Pittway parties which it concluded that Interactive would not have made. The district court denied the Pittway parties' JMOL motion and motion for a new trial on May 27, 1998.

II.

We turn first to the Pittway parties' contention that the finding of equivalent infringement was inconsistent with the district court's prior claim construction. Infringement under the doctrine of equivalents "is a question of fact, which we review for substantial evidence in the context of a jury trial." B. Braun Med., Inc. v. Abbott Lab., 124 F.3d 1419, 1423, 43 USPQ2d 1896, 1899 (Fed. Cir. 1997). "Substantial evidence is more than a mere scintilla. It means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion." Consolidated Edison Co. v. NLRB, 305 U.S. 197, 229 (1938). We cannot uphold the finding of equivalent infringement unless "every limitation in any construed claim at issue is found in" the 5800 at least equivalently. Unidynamics Corp. v. Automatic Prods. Int'l, Ltd., 157 F.3d 1311, 1317, 48 USPQ2d 1099, 1103 (Fed. Cir. 1998). We

agree with the Pittway parties that there was not substantial evidence to support the finding of equivalent infringement here because at least one limitation of each of the asserted claims of the '713 patent was altogether missing from the method and apparatus of the accused devices and their substitute elements, alleged to be equivalent, actually performed a distinctly different function.

In its claim construction, the district court defined "unique identity code," as that term is used in the '713 patent, to mean "[a]n identifier which is assigned in a manner which assures that transmitters installed in the same operational area have only a remote likelihood of having the same identifier." Interactive, slip op. at 12 (Oct. 24, 1997). With respect to claim 1, step (a), the court declared that "the identity code the patent refers to is that of the transmitter ... not the individual loops or inputs (of the transmitter]." Id. at 11. Moreover, for step (f) of claim 1, the court held that this unique identity code was stored in the code table "only when no pre-existing matching identity code exists." Id. at 21. The court explained that the term "identity code" in step (f) had the same meaning as the term "unique identity code" in step (a). See id. at 20. Thus, given the district court's express ruling that the "unique identity code" refers to the transmitter's identification code, and not to the codes of the individual sensors or loops, the "unique identity code" in the context of the 5800 system must apply to the twenty-digit transmitter identification code, and not the two-digit sensor identification code or the twenty-two-digit loop identification code. Under this construction, to which Interactive does not object and which we view as correct, the 5800 system cannot meet the limitation of claim 1, step (f), either literally or equivalently, because the same twenty-digit transmitter code is stored in duplication in the code table if there are multiple sensors attached to that transmitter. Storing such codes in duplication, though, is contrary to the district court's unchallenged construction that

step (f) permits storage of the identity code "only when no pre-existing matching identity code exists." Id. at 21.

Although the district court ruled that the 5800 system did not infringe literally, in part because the transmitter identification codes could be stored in duplicate, see Interactive, slip op. at 12 (Dec. 2, 1997), it nonetheless declined to grant summary judgment of no equivalent infringement because "material issues of fact exist regarding equivalency of Claims 1 and 7 to Defendants' product," id. at 13. We cannot review this ruling directly because no specific explanation was given by the district court. We hold, however, that equivalent infringement cannot be found here as a matter of law because the function of step (f), that is, writing a transmitter identification code into a code table "if not located" as already in the code table, is not found in the accused devices due to the undisputed fact that the accused devices can store transmitter identification codes in duplicate.

In Unidynamics we were presented with a similar issue. At issue in that appeal was whether certain vending machines for dispensing refrigerated and unrefrigerated foods infringed Unidynamics's patent on a food vending machine. One of the limitations of the patent-in-suit was that its food dispensing area had a door covering the opening "and spring means tending to keep the door closed." Unidynamics, 157 F.3d at 1314, 48 USPQ2d at 1101. The accused vending machines, though, used either a magnet or a padded bracket to keep the door closed, which devices acted to keep the door closed but did not act, as the spring did, to close the door. See id. Although evidence was presented that the spring, the magnet, and the padded bracket were all "interchangeable," we nonetheless held:

> that as a matter of law neither version of the [accused vending] machines has any structure that performs substantially the same function of 'tending to keep the door closed.' No reasonable jury could

> find that maintaining the can loading door in a closed position is substantially the same function as tending to keep the door closed regardless of the position it is in. Therefore, neither version of the [accused vending] machines infringes the ... patent under the doctrine of equivalents.

Id. at 1322-23, 48 USPQ2d 1106.

In the instant case, the function of claim 1, step (f) of writing a transmitter identification code into a code table "if not located" as already in the code table cannot be met equivalently by the 5800's function of storing duplicate transmitter identification codes. This limitation, which appears in various forms in all asserted claims of the '713 patent, functions to ensure that all stored transmitter identification codes are different. The 5800, by contrast, clearly permits the storage of duplicate transmitter identification codes. While the 5800 does not permit the storage of duplicate loop identification codes, this feature does not "function" to ensure that duplicate transmitter identification codes are not stored. Rather, the function of not storing duplicate transmitter identification codes is altogether missing from the 5800. As with Unidynamics, while the feature of not storing duplicate loop identification codes might be interchangeable with not storing duplicate transmitter identification codes, it is functionally distinct and thus not equivalent as a matter of law. See also Weiner v. NEC Elecs., Inc., 102 F.3d 534, 542, 41 USPQ2d 1023, 1029 (Fed. Cir. 1996) (holding that "because a specific claim limitation is totally missing in the accused devices, the accused devices do not infringe under the doctrine of equivalents").

Our reasoning with respect to claim 1, step (f), applies with equal force to claim 7. Step (a) of claim 7 similarly refers to "means for permanently storing a unique identity code" and, in its Markman ruling, the district court correctly

held that this unique identity code" was the same one set forth in claim 1. See Interactive, slip op. at 21 (Oct. 24, 1997). Like step (f) of claim 1, step (e) of claim 7 then refers to "writing said temporarily stored identity code into said table if not already present." Thus, consistent with claim 1, claim 7, step (e)'s function of "writing said temporarily stored identity code into said table if not already present" cannot be found in the accused devices, either literally or equivalently, because they indisputably permit duplicate transmitter identification codes to be written into the code table. Finally, because claim 9 is dependent from claim 7, there is also no infringement of claim 9 as a matter of law.

III.

The Pittway parties contend that the jury's determination that the '713 patent was not invalid for obviousness was not supported by substantial evidence. Patents are presumptively valid, see 35 U.S.C. § 282 (1994), and "an accused infringer who defends on grounds of patent invalidity bears the burden of showing patent invalidity by clear and convincing evidence." Al-Site Corp. v. VSI Int'l, Inc., __ F.3d __, __, 50 USPQ2d 1161, 1170 (Fed. Cir. 1999). Substantial evidence supports the jury's verdict that the Pittway parties failed to meet this burden here. The Pittway parties alleged that the '713 patent was obvious in light of a 1984 piece of prior art, the Honeywell System 2000 Installation Guide, and either of two other prior art references, specifically United States Patent No. 4,750,118 (the "'118 patent"), which related to garage door openers, and printed publications describing a nursing home security system developed by Tunstall Telecom. When an invalidity determination depends upon a combination of references, the party seeking to prove invalidity must show some motivation or suggestion to combine the prior art teachings. See Motorola, Inc. v. Interdigital Tech. Corp., 121 F.3d 1461, 1472, 43 USPQ2d

1481, 1489 (Fed. Cir. 1997). We hold that there was substantial evidence upon which a reasonable jury could have relied to find that the motivation to combine these prior art references was not proven by clear and convincing evidence. The sole evidence proffered of a motivation to combine was that several prior art patents mentioned there being a similarity between garage door openers and home security systems. However, such limited evidence of there being a general relationship between the fields does not suggest a motivation to combine the particular references here relied upon by the Pittway parties. Certainly, on this record, we cannot say that the jury was unreasonable to find that invalidity was not proven by clear and convincing evidence.

IV.

The Pittway parties further argue that the judgment that the '713 patent is not unenforceable for inequitable conduct is unsupported by substantial evidence. We review the jury's verdict of no inequitable conduct, as later adopted by the district court, to determine whether substantial evidence supports the findings that the requisite levels of intent and materiality were not proven by clear and convincing evidence. See Hupp v. Siroflex of Am., 122 F.3d 1456, 1465, 43 USPQ2d 1887, 1893 (Fed. Cir. 1997). Here, substantial evidence supports the jury's verdict. Moreover, the district court adopted those findings and we cannot say its doing so was clear error.

The inequitable conduct alleged by the Pittway parties was the withholding from the examiner of a certain feature of Interactive's SX-V system and the installation manual which, inter alia, describes this feature. However, the SX-V system was disclosed to the examiner and the inventor testified that the installation manual contained errors as to how the SX-V system actually worked and that, consequently, he described the system himself in the patent application that led to the

issuance of the '713 patent but did not disclose or submit the manual. Thus, given that the SX-V system was in fact disclosed, that the inventor offered a plausible reason as to why the installation manual was not disclosed, and that the jury had the opportunity to determine the inventor's credibility from his live testimony, the jury could reasonably have found that there was not clear and convincing evidence of an intent to deceive the examiner. Moreover, given that the SX-V system related to manually-entered house codes and not factory-programmed transmitter identification codes, the jury could additionally or alternatively have found that the materiality of the withheld prior art was not proven by clear and convincing evidence. Accordingly, we do not disturb the district court's judgment that the '713 patent was not proven unenforceable for inequitable conduct.

Finally, we have considered the various secondary arguments raised by the Pittway parties at the end of their brief relating to the district court's evidentiary rulings and its jury instructions and conclude that they have no merit.

COSTS

Interactive to bear costs.

United States Court of Appeals for the Federal Circuit

98-1464

INTERACTIVE TECHNOLOGIES, INC.,

Plaintiff-Appellee,

v.

PITTWAY CORPORATION and
ADEMCO DISTRIBUTION, INC.,

Defendants-Appellants.

ORDER

United States Court of Appeals for the Federal Circuit

ORDER

A combined petition for rehearing and suggestion for rehearing en banc having been filed by the APPELLEE, and the petition for rehearing having been referred to the panel that heard the appeal, and thereafter the suggestion for rehearing en banc having been referred to the circuit judges who are in regular active service,

UPON CONSIDERATION THEREOF, it is

ORDERED that the petition for rehearing be, and the same hereby is, DENIED and it is further

ORDERED that the suggestion for rehearing en banc be, and the same hereby is, DECLINED.

The mandate of the court will issue on July 15, 1999.

FOR THE COURT,
/s/
Jan Horbaly
Clerk

Dated: July 8, 1999

cc: LAURENCE S. ROGERS
WAYNE E. WILLENBERG

INTERACTIVE TECH V PITTWAY CORP, 98-1464
(DCT - 95-CV-771)

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* Note: Pursuant to Fed. Cir. R. 47.6, this order is not *
* citable as precedent. It is a public record. *
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